

Tennessee Pollution Prevention Partnership Success Story



Tennessee Koyo Steering Systems
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Hazardous Materials Eliminated From Facility

The Member

Tennessee Koyo Steering Systems Co. (TKS) has been in operation at their Monroe County Vonore, TN site since 1989. The facility of 345,000 sq ft and 800 employees is located on property adjoining Lake Tellico. Currently the facility produces over 8,000 rack and pinion steering systems per day for domestic and international original equipment auto manufacturers. TKS is ISO 14001 certified and has a very positive attitude toward environmental management and protecting the environment. TKS is committed to complying with environmental laws, regulations, and other requirements, and to continually improving their environmental performance.



The Story

Since its inception, the Vonore TKS facility has been a hazardous waste generator. During its fifteen years of operation the TKS facility has decreased from a large quantity hazardous waste generator, to a small quantity hazardous waste generator, and is now a conditionally exempt small quantity hazardous waste generator thanks to continued efforts by the environmental management to eliminate all hazardous waste from the facility. Senior management at the facility has likewise been firmly committed to finding alternate materials and processes which will result in the use of non hazardous materials and materials which do not result in hazardous

wastes. Heavy machining performed at the operation and the lubricants required for the process, previously required TN Koyo Maintenance personnel to utilize aggressive cleaners during their machinery and tooling repair operations. The cleaner of choice at the facility had been Natural Degreaser™ that is obtained in 12oz aerosol cans. The cleaner is pressurized, flammable, and any residue must be disposed of as a hazardous waste and the aerosol containers punctured and drained for recycling.

The Success

After extensive research and in house trials, the facilities engineering and environmental teams identified a more versatile environmentally friendly non hazardous alternate cleaner, which is comparable and in instances superior to the Natural Degreaser™ for over 80% of TKS's maintenance applications. The replacement cleaner, HydraForce® All Purpose Cleaner/Degreaser, is water based, non-flammable and non-aerosol. Additionally there is not any residue left over for disposal and the plastic bottles have been included in the facilities plastics recycling program.

The Pollution Prevented

During the January through October period in 2003, TKS used 3,201 12oz cans of the aerosol Natural Degreaser. For the same period in 2004, only 1,858 of the cans were used providing a 42% reduction in the use of the aerosol Natural Degreaser. In place of the Aerosol, 765 12oz bottles of the Hydraforce non-aerosol cleaner were used, providing an overall cost savings of \$948.09 and eliminating the environmental impact of aerosol propellants while significantly reducing another hazardous waste stream.

November 2004